



RESPONSE UNDER 37 CFR 1.116  
EXPEDITED PROCEDURE -  
EXAMINING GROUP 2815

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10/28/02  
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PATENT

Attorney Docket No.: 020487-000300US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Yueh Yale Ma et al.

Application No.: 09/467,141

Filed: December 10, 1999

For: DUAL-BIT DOUBLE-  
POLYSILICON SOURCE-SIDE  
INJECTION FLASH EEPROM CELL

Examiner: E. Lee

RESPONSE UNDER 37 CFR 1.116  
EXPEDITED PROCEDURE

EXAMINING GROUP 2815

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Assistant Commissioner for Patents  
Washington, D.C. 20231

October 18, 2002

Sir:

In response to the Final Office Action mailed June 18, 2002, for which a request for a one-month extension of time to reply is enclosed, Applicants provide the following remarks:

REMARKS

Claims 1-18, 21-29, and 37-49 are pending. Claims 38-49 have been withdrawn from consideration by the Examiner as being directed to an invention that is independent or distinct from the invention originally claimed. The remaining claims have been rejected as set forth in the following section.

35 USC 102(b) and 103(a) rejections:

Claims 1-4, 7-9, and 25-26 are rejected under 35 USC 102(b) as being anticipated by Tigelaar USPN 5,273,926. Claims 5, 6, 21-24, 27-29, and 37 are rejected

under 35 USC 103(a) as being unpatentable over Tigelaar '926 in view of Guterman '691. Claims 10-18 are rejected under 35 USC 103(a) as being unpatentable over Tigelaar '926. These rejections are respectfully traversed.

Claim 1 distinguishes over Tigelaar at least by reciting "first and second floating gates over the channel region".

The Office Action indicates that the first and second floating gates recited in Applicants' claim 1 are shown by floating gate elements 60a, 60b in Fig. 3e of Tigelaar. This is traversed because elements 60a and 60b form part of one floating gate 60, and thus do not constitute "first and second floating gates" as recited in Applicants' claim 1.

Tigelaar in column 5, lines 11-16, in reference to Fig. 5c, states:

The floating gates 58-62 are shown in phantom, and preferably take the form of hollowed-out rectangles.  
Portions 100 ... connect the floating gate portions 60a and 60b to be a single conductive unit.

Underline is added. That floating gate portions 60a and 60b form part of a single floating gate is more clearly shown in Fig. 3d. Here, a rectangular portion 82 of floating gate 60 is cut out so that a rectangular opening is created in floating gate 60. Thus, portions 60a and 60b form parts of a single floating gate, not "first and second floating gates" as recited in Applicants' claim 1.

The "first and second floating gates" recited in Applicants' claim 1 has significant functional implications. Two floating gates in one cell enables storing two bits of information in one cell (hence the invention title "dual-bit ... cell"). In contrast, Tigelaar's cell can store only one bit of information since it contains only one floating gate. Support for this assertion can be found in column 5, lines 36-38 wherein Tigelaar states "[t]he cell of the invention is read, written to and erased in a fashion similar to conventional EEPROM cells such as the cell shown in FIG. 2". The cell in Fig. 2 has only one floating gate and stores one bit of information.

Thus, claim 1 and its dependent claims 2-18 and 21-27 distinguish over Tigelaar at least for the above reason.

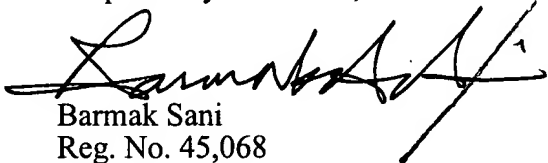
Claims depending from claim 1 include features which further distinguish them over Tigelaar. For example, claim 9 recites "each of the first and second floating gates stores one bit of information". As stated above, Tigelaar's cell has only one floating gate and thus is not capable of storing two bits of information.

Claim 28 includes similar limitations to those discussed above in connection with claim 1, and thus claim 28 and its dependent claims 29 and 37 distinguish over Tigelaar for at least the reasons stated above.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is urged. If the Examiner believes a telephone conference would aid in the prosecution of this case in any way, please call the undersigned at 650-326-2400.

Respectfully submitted,

  
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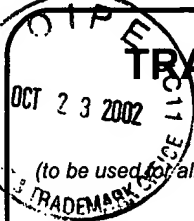
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(to be used for all correspondence after initial filing)

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First Named Inventor	Ma, Yueh Yale
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Examiner Name	E. Lee
Attorney Docket Number	020487-000300US

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6

## ENCLOSURES (check all that apply)

<input type="checkbox"/> Fee Transmittal Form <input type="checkbox"/> Fee Attached <input checked="" type="checkbox"/> Amendment / Reply <input checked="" type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input checked="" type="checkbox"/> Extension of Time Request (2) <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/ Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s)	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below):  Return Postcard
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Remarks

The Commissioner is authorized to charge any additional fees to Deposit Account 20-1430.

## SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm and Individual name	Townsend and Townsend and Crew LLP Barmak Sani	Reg. No. 45,068
Signature		
Date	October 18, 2002	

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, D.C. 20231 on this date:

October 18, 2002

Typed or printed name	Gloria Sikora		
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